



## State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MININGNorman H. Bangarter  
Governor  
Dee C. Hansen  
Executive Director  
Dianne R. Nielson, Ph.D.  
Division Director355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

January 25, 1989

Mr. David R. Smaldone, Director  
Permitting, Compliance and  
Services, Mining Division  
Utah Power and Light Company  
41 North Redwood Road  
Salt Lake City, Utah 84140

Dear Mr. Smaldone:

Re: Deficiency, PAP Amendment, Waste Rock Disposal Site, Road  
Alignment Amendment, Utah Power and Light Company, Deer  
Creek Mine, ACT/015/018-88E, Folder #2, Emery County, Utah

The Division has completed a review of your company's submittal received December 12, 1988. The plans were reviewed by Tom Munson of the Division's technical staff. Please resolve the following deficiencies.

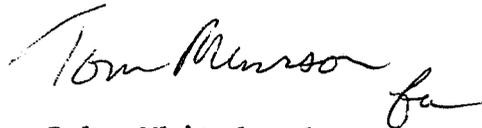
Since the channel adjacent to the road was realigned, a steeper channel profile has resulted (approximately 1 percent steeper). Thus, channel head cutting and erosion is a potential. Utah Power and Light Company (UP&L) should submit peak flow calculations and calculate resultant velocities in the realigned channel section. Peak flow should be calculated using a 100-year, 24-hour event. If this event overtops the existing undisturbed channel cross sections, then the bankfull channel capacity of the upstream and downstream channel cross sections will determine the design criteria needed to establish an acceptable peak flow value. Using this peak flow, estimating a resultant velocity (using an estimated Mannings's "n" co-efficient), the appropriate protection plan, (riprap, etc.) must be proposed, utilizing accepted engineering methodologies.

Page 2  
Mr. D. Smaldone  
ACT/015/018  
January 25, 1989

After reviewing the peak flow, velocity and channel protection materials, a Division hydrologist will conduct a field analysis when weather permits of the upstream and downstream channel sections to verify the appropriateness of the design measures proposed. A final design measure will be arrived at following the field verification.

If you have any questions, please call Tom Munson or me.

Sincerely,

A handwritten signature in cursive script, appearing to read "John Whitehead".

John Whitehead  
Permit Supervisor/  
Reclamation Hydrologist

djh  
Attachment(s)  
cc: J. Helfrich  
T. Munson  
AT25/20-21